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Awareness of feeding plates among the parents of cleft lip and palate children in Kashmiri population-an original research

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Abstract

Neonates with cleft lip&/or palate face a lot of difficulties because of a lack of proper seal between the oral and nasal cavities. Feeding is the most common problem faced by parents of such children. This problem can be addressed by feeding plates which obturate the cleft and promote development of seal, hence proper feeding is initiated. So the role of a Prosthodontics is very important. However parents need to have proper knowledge about the same so that they can bring their children for proper consultation. The purpose of this study was to evaluate the level of awareness about feeding plates among the parents of cleft lip&/or plate children. This study was conducted in the Department of Prosthodontics Govt Dental College Srinagar. Questionnaires were distributed to parents of children with cleft lip &/or palate and responses to the questionnaires were then analyzed. 50 Parents participated in the study. Results of the study found that parents faced a lot of feeding difficulties. However more than half of them were unaware about the feeding plates and wished to have received more information about the same. The study concluded that the early provision of prosthesis will result in better outcome for these patients, & there is a need to increase awareness regarding role of Prosthodontics during rehabilitation of cleft patients.

Keywords: cleft lip and palate, feeding plates, parents, Kashmiri population

Introduction

Cleft lip and cleft palate are birth defects that occur when a baby's lip or mouth do not form properly before birth. Together, these birth defects commonly are called "orofacial clefts" or "oral clefts". Affecting 1-2 per 1,000 newborns, together they are among the more common congenital defects affecting the face. These birth defects happen early during pregnancy, by 5 to 6 weeks after conception for cleft lip and by about 10 weeks after conception for cleft palate. A baby can have a cleft lip, a cleft palate, or both.¹Babies born with Clefts lip and palate are associated with a constellation of problems that need to be solved for successful rehabilitation ^[2, 3]. Neonates with a cleft palate have difficulty in eating which may lead to failure to thrive ^[4]. The oro-nasal communication diminishes the ability to create negative pressure which is necessary for suckling ^[5-8]. To compensate, the baby presses the nipple between the tongue and the hard palate to squeeze out the liquids and milk, but this mechanism is insufficient if cleft is wide and the nipple gets trapped inside the defect ^[9]. The feeding process is also complicated by nasal regurgitation of food, ^[4, 5, 7, 10] excessive air intake that requires frequent burping and choking ^[4, 7]. Feeding time is significantly longer and fatigues both baby as well as mother ^[4, 5, 7, 9]. So, the goal for parents of such babies is to have as normal feeding as possible. While there are many available techniques and devices used to assist with feeding, the feeding plate is one such prosthodontic appliance which obturates the cleft and restores the separation between oral and nasal cavities. It creates a rigid platform towards which the baby can press the nipple and extract the milk ^[4, 7]. It facilitates feeding ^[4, 7], reduces nasal regurgitation ^[4, 6, 7, 12], reduces the incidence of choking⁴ and shortens the length of time required for feeding ^[4, 8, 5, 7, 13]. The research also indicates increase in effectiveness of feeding when such appliances are used, HOWEVER parents are not always informed of these options. Till now, there is no evidence in literature which evaluates the level of awareness about feeding plates among parents of cleft lip/palate patients in Kashmiri population. Hence the purpose of this study was to evaluate the level of awareness about such appliances among

The parents of CLP patients and to assess whether a need exists to organise a campaign and inform them about the same via mass media in Kashmiri population. This could provide valuable information for designing and improving current services for children with Cleft lip & palate.

Materials and Methods

This Questionnaire based study was conducted in the Department of Prosthodontics, Crown and Bridge, Govt. Dental College Srinagar Kashmir. Inclusion criteria for this study included the biological parents of children born with CLP, whose children with CLP were aged between 0-24 months and who were permanent residents of Kashmir. Parents were recruited from 2 sources. The first was GB Pant Childrens hospital Srinagar, Kashmir and second was the parents reporting to Department of Prosthodontics, Govt. Dental College & Hospital Srinagar, Kashmir. A self-explanatory Questionnaire (APPENDIX 1) was formulated to assess the level of awareness about feeding plates among the parents of CLP Children. Questions included both open and closed ended responses. After approval from the ethical committee, questionnaires were distributed to parents of children with CLP & completion of the questionnaire served as study consent. Data collection was done over a period of 2 years w.e.f March 2016-March 2018. The questionnaires were then reviewed and the responses to the questions were analyzed using qualitative measures.

Results

Fifty parents of children with CLP completed the parent questionnaires. Data from all completed questionnaires was used in the study. The ages of the parents ranged from 20-53 years, with a mean age of 32 years (SD = 8 years). The children with CLP in the study included 23 males (46%) and 27 females (54%). Their ages ranged from seven days old-2 years old, with an average age of 17 months. The parent group consisted of a socioeconomically diverse sample, ranging from unskilled workers/unemployed persons at the poverty level to professional workers. Most of the parents fell within the area of skilled, non-professional workers. The parent's education levels ranged from the eighth grade to a doctorate level.

Table 1: Demographic Information

Gender	Parent	Child
Female	30 (60%)	27 (54%)
Male	20 (40%)	23 (46%)
AGE(MEAN)	32 Years	17 Months
Cleft Condition		
Cleft palate only		62%
Cleft lip & palate		38%

In the study sample, parents who reported that their children had difficulties with feeding totalled 78%. Percentage of parents who used feeding aids other than feeding plates was 22%. Among them 97% used long nipple as a feeding aid for their children. However none of them seemed to be satisfied with the effectiveness of long nipple; with parents reporting longer feeding periods and nasal regurgitation of milk as the two most common complaints associated with long nipple. Out of all the parents, 68% had no idea about feeding plates and 33% had just heard about the same, however, they were not fully aware of its benefits. Results of the study found that parents wished they received more information related to feeding.

Discussion

Oral rehabilitation for cleft patients starts from neonatal age. At neonatal stage fabrication of feeding obturators/plates will be great beneficial for these patients to improve the suckling and swallowing^[14]. Hansen *et al* discussed the significance of provision of feeding plates for neonate/ infants^[15]. Infants with CLP are not able to successfully draw milk from nipple or breast because of which they consume excessive amounts of air which can lead to nasal regurgitation and burping (Mitchell & Wood, 2000)^[16]. The feeding obturator overcomes the factors that act as a stumbling block in the milestones of normal development and should be inserted as early as possible after birth. Feeding plate prosthesis reduce the stress of both parents and the baby. It can aid nursing, stimulate oral-facial development, helps develop the palatal shelves, prevent tongue distortion and nasal septum irritation, decrease the number of ear infections, expand the collapsed maxillary segment and promote neonate health which is important in preparing the baby later for the surgical procedures.¹⁷ Bansal¹⁸ discussed that the early provision of feeding plates will be more effective, they discussed a case where feeding plates was provided for one day old neonate. Additionally, Savion and Huband (2005)^[19] suggest that the use of a feeding plate may reduce stress on behalf of the parents and child and may encourage weight gain. Adequate knowledge of these appliances is necessary for the management of patients with clefts involving lips and palate^[20]. Because parents view health care professionals as the most trusted source of information (Wainstein *et al.*, 2006)^[21], it is the role of the Prosthodontist to provide the parents with more information about feeding plates. As questionnaire results concluded, most of the parents faced difficulties related to feeding their babies. In addition, more than half of the parents were unaware of the feeding plates and they desired to have received more information regarding the same. The results of this study support the finding of the Young *et al.* (2001)^[22] study indicating that parents indeed desire information about feeding and swallowing and that it is a topic of major concern for families.

Conclusion

Feeding difficulties can result not only in poor physical health of the infant or child with CLP, but can result in mental and emotional health concerns for the parents as well. Given the anatomical and physiological differences caused by CLP, external supports are often needed so that a child with CLP can effectively feed^[23]. Such aids can be provided effectively by feeding plates. The results of this study concluded that in our society due to lack of awareness in parents and regarding feeding plates, mostly parents do not approach prosthodontic for treatment of their neonates. So, a need exists to address this problem by organising campaigns and make people more aware of these options in this part of valley.

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Appendix 1
Parent Questionnaire for Children with Cleft Lip and/or Palate

Please answer the following questions about your experiences with feeding your child with a cleft lip and/or palate. Please feel free to give as much information and as many details as you would like. By responding to this questionnaire, you are consenting to participate in the study. Your responses will remain confidential. Should you choose to not participate in the study, you may discontinue completion of the questionnaire at any point.

1. What is your relationship to your child?
 (Please tick one)
 Mother Father
2. What is your child's gender?
 (Please tick one)
 Female Male
3. What is your age?
4. What is your child's age?
5. What type of cleft does your child have?
6. My child was born at:
 Hospital (name: _____)
 Home
 Other _____
7. Did you have any problems with feeding your child?
 (Please tick one)
 Yes No
 If yes, please explain:
8. How do you feed your baby and how effective is the technique you are using?
9. Did you know about feeding plates?
 (Please tick one)
 Yes No
 • If NO, Do you wish to know more about them?
 (Please tick one)
 Yes No
10. Highest level of education mother completed:
11. Highest level of education father completed:
12. Mother's occupation:
13. Father's occupation: